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ABSTRACT

The monograph on the certification of vocational-technical educators, which consists of seven articles by authors with recognized expertise on the subject of certification, was prepared to disseminate helpful certification information to vocational educators in Pennsylvania. Two articles present background information on the history of vocational teacher certification in the United States (Joseph A. Ford) as well as a national overview of vocational certification (Wayne S. Ramp). A third article summarizes the degree, nondegree, and intern vocational teacher certification in Pennsylvania (Seymour T. Brantner). Other topics focused on are the State vocational supervisor and administrator certification (Louis B. Kirkland) and the Occupational Competency Examination administered by State teacher education institutions prior to certification (Harry M. Kraft). Two concluding articles discuss vocational teacher certification in New York (James R. Stratton) and Missouri (Franklin J. King) and offer the reader a comparison of similarities and differences in certification requirements of other States. (EA)

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CERTIFICATION OF VOCATIONAL-TECHNICAL EDUCATORS

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The Pennsylvania State University

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INTRODUCTION

The Department of Vocational Education and the Center for the Study of Higher Education of The Pennsylvania State University recently sponsored a conference on the certification processes and procedures for vocational educators in Pennsylvania.

It became evident during the preparation for, conducting of, and follow-up of the conference that certification rules and procedures are frequently misinterpreted. It was decided to prepare this monograph to serve as a medium which would permit the sharing of information about certification. The contributors were selected because of their recognized expertise on the subject of certification. The included papers permit a comparison of requirements among various states. They also emphasize the many similarities that exist.

It is recognized that changes and modifications in requirements are occurring regularly; this reflects the ever changing nature of education. Some of these changes for the future are discussed in certain papers. All of the papers attempt to disseminate information that will enhance the more thorough understanding of certification.

I appreciate the participation of the authors; I hope that each reader will find their explanations and suggestions helpful.

This monograph was supported by funds from the Bureau of Vocational Education of the Pennsylvania Department of Education and the Department of Vocational Education of The Pennsylvania State University.

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HISTORY OF VOCATIONAL TEACHER CERTIFICATION IN THE UNITED STATES

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Principles of Certification

In primitive society there were no schools. The minimum amount of education that was secured was acquired through personal experience, from information gained through parents, especially the father, or from the initiation exercises for tribal society. Later, some phases of education were taken over by the priestly class. As society became more complex, formal education and the profession of teaching came into existence. As long as there were no schools, education was a private, individual affair. A parent selected a tutor or teacher, if he wanted one, for his son, and no one interfered. There was no need for a certificate, and none was required.

The medieval church licensed its priests. Cubberley (1927) stated:

> The medieval church early began the licensing of priests to teach song and grammar, and early required, in addition to evidence as to competency, an oath of fealty as well. The examination of the candidates for Master of Arts, which was originally the teaching degree, became from the first one of the functions of the medieval university, and in some form or other this examination has been continued ever since (p. 621).

As the idea of public schools spread, certificates for public school teachers became the rule rather than the exception. Private schools, on the other hand, have continued alongside the public schools, and for the most part the state government has not required their teachers to be certified.

Governments have been organized primarily to protect members of society, both from without and within, and to promote the public welfare. These two purposes seem to be the fundamental motives for a community or a state in requiring its teachers to be certified. The community or state desires to protect its children from incompetent teachers. For similar reasons laws have been enacted requiring physicians, lawyers, nurses, dentists, pharmacists, embalmers, optometrists, steam engineers, and public accountants to hold licenses or certificates.

The objective of certification is clearly shown in the first certification law of Ohio, which reads as follows:

> Section 11. That the court of common pleas of each county shall annually appoint three suitable persons to be called Examiners of Common Schools, to serve for the term of one year, and until their successors shall be appointed, and fill any vacancy which may happen, whose duty it shall be to examine every person wishing to be employed as a teacher, and if they find such person qualified and of good moral character, to give a certificate to that effect; and any one of said examiners may visit the schools in the county and examine the same and give such advice relative to discipline, mode of instruction and management of said schools, as they may think beneficial.
>
> Section 12. That no person shall be allowed to teach any district school until such person be examined and approved by one or more of the examiners of common schools, and receive a certificate of approbation from said examiner or examiners; and no teacher of any district school, who shall not have obtained such certificate, shall recover at law any wages or compensation for teaching such school (pp. 39-40).

The certificate was therefore used as a document to certify that the holder was qualified to teach. Furthermore, by this law no person was allowed to teach in any public school unless he held such a certificate.

Clearly the Ohio Law of 1925 had for its purpose the control of the qualifications of teachers through certification. By requiring teachers to hold certificates a state or any other government can demand that teachers have certain prescribed qualities and obtain such standards as it may set up. By making the certificate a legal document, without which a person cannot teach, the state is in a better position to impose its requirements on its teachers.

Kinney (1964) has distinguished between licensure and certification. The former, he holds, is evidence of admission to the teaching profession. Legal licensure, in his view, is a civil service procedure, the purpose of which is to control employment and remuneration. According to this view, certification should be the prerogative of professional associations and would, in fact, be based upon evidence of competence and would be a prerequisite to legal licensure. Evidence that licensure may not presently reflect qualification and competence in teaching is the continued practice of the states of issuing upward of 100,000 emergency or substandard licenses each year and the great diversity among the states in minimum requirements for regular certification.

For controlling the qualifications of teachers, standards for certificates prescribe the minimum professional preparation for teachers receiving certificates. The certificate, therefore, may be not only an

important influence in determining the professional preparation of new teachers, but may also be a tool for controlling the professional growth of teachers in service, through renewals of certificates (Dilley, 1935). Moreover, standards for certificates may be utilized for affecting the program of professional preparation in teacher-training institutions. Bachman (1933) observes that this latter influence is probably not very great, especially for the better institutions, for as a rule the heads of these institutions are further advanced in their professional thinking and planning than are state legislators or officials of state departments of education, who prescribe minimum requirements for certificates.

It is necessary for legislative bodies to enact laws fixing minimum requirements because some communities lag behind and are satisfied with teachers less well qualified. Certifications laws are therefore passed for the purpose of having competent teachers for every child in the schools. If it is necessary to have compulsory minimum education for all children, it is also necessary for the state to guarantee qualified teachers for these children.

Laws in the United States which require teachers in publicly supported schools to hold certificates and to have certain qualifications have always been upheld. Authority for this statement is taken from Cubberley (1927), as follows:

> Laws have required that no teacher shall be employed in any school, wholly or in part support by the proceeds of public instruction, unless such teacher holds a certificate of qualification, issued and signed by proper authority, and the courts have repeatedly upheld and helped to enforce such legislation (p. 621).

Certification laws keep changing, and professional standards for certificates are being raised, but no state of the United States has seen fit to abandon certificates for its teachers. The states probably have no more idea of abandoning certification for their teachers than they have of abolishing licenses or certificates for their physicians, nurses, or lawyers. On the contrary, it is probable that licensing will be extended in the future to include additional professional vocational groups in order that society may be better protected.

Responsibility of Certification

The states, from the very beginning, have exercised control over the public schools. Each state was authorized by the Tenth Amendment to the Constitution to organize its educational system as it saw fit. Some powers were retained by certain parts of the state government, while others were delegated to the local communities. The conditions of the early times, i.e., difficulty of transportation and communication, isolation of communities, and weakness of state governments, made it

imperative to give certain authority over the public schools to the local communities. Certification of teachers was at first in the hands of district authorities; later the power of certification passed into the hands of county authorities, and more recently it has been exercised directly by the state government itself (Dilley, 1935).

The latter development came about because there were a number of defects in the local system of certification. Cook (1927) summarized the principle defects as follows:

> (1) Local certificating officials are too close to the rank and file to refuse certificates to poorly prepared teachers; (2) local certification is a barrier to the movement of teachers from county to county and to interstate reciprocity in certification; (3) local certification results in enormous differences in standards for teachers in the various localities (p. 221).

Other defects that were noteworthy included: (1) There were too many certificating authorities. This resulted in as many standards of certification as there were certificating boards. (2) There was lack of unified control of certification where local boards issued certificates. Even though the state made regulations and prescribed rules, it was impossible in the semi-state and state-county systems to carry out anything like a uniform system of certification because the local boards issued the certificates. As long as local boards issued certificates there could be no uniform state standards of certification. (3) Local systems had the tendency to limit competition to the home product. (4) The local board of examiners was almost under obligation to issue a certificate to a teacher whom the local board of education wanted to employ.

The survey commission of public higher education (1931) in Arkansas added something to the picture in the following statement:

> Marked improvements in the educational and social standards of the Arkansas teaching staff cannot be expected under present conditions of licensing teachers. There are entirely too many standards of judgment possible under the present system. For example (1) county certificates may be granted by examinations held by county superintendents; (2) special certificates in music, art, etc., may be granted by county superintendents on a basis of credential.... It is therefore apparent that at least seventy-six different individuals or groups are vested with certification power (p. 30).

This description of teacher certification in the early 1900s illustrates the bleak condition and haphazard management of certification procedures prevalent at that time. Earhart (1946) reported a somewhat brighter picture in the area of vocational teacher certification. She found two types of supervision or controls in vogue, in her study of

vocational teacher training and certification, that came closest to resembling some pattern of certification throughout the United States. These two controls were as follows:

> Dual Control--In some states the department of vocational education is separated from the state department of education. Each operates independently of the other; each has its own state board; each makes its own appointments, rules, and regulations; and each board certifies its teachers for the various phases of school work under the separate board. The state department of education has an executive officer as its head, while the department of vocational education has a director.
>
> Unit Control--In other states the chief executive officer of the department of education is the controlling officer of both boards, and there may or may not be a state director of vocational education in that particular state. In any event, the vocational education activities are under the state executive officer, either directly or through a director of vocational education who reports to the executive officer. All certification is handled through the person in charge of certification in that particular state (p. 32).

Vocational Teacher Certification

Early certification requirements of teachers of vocational subjects in this country, i.e., agriculture, home economics, and manual training, was reflected in the Ohio statute governing issuance of special certificates. The statute read as follows:

> A graduate from any normal school, teachers' college or university, who has completed a special two-year course, with training school experience in music, drawing, penmanship, manual training, physical culture, domestic science, agriculture, kindergartening, any modern language, or such other studies as are required to be taught by special teachers or supervisors and who also possess a first grade high school diploma or its equivalent, shall upon application to the superintendent of public instruction and the payment of a fee of one dollar, be granted without further examination a provisional special certificate in such subject or subjects valid for four years in any school district within the state; provided that such institution has been approved by the superintendent of public instruction (p. 430).

The accelerated program of vocational education brought on by the enactment of the Smith-Hughes Act in 1917 carried with it an established

principle that has had a profound effect on the training of vocational teachers. This principle ran contrary to the rising tide for normal school or college preparation as a minimum for all teachers. The Federal Board for Vocational Education made its position clear in its pronouncement of August 1918:

> It is, of course, essential always that the teacher shall be able to teach, but it does not follow that he shall always qualify as a professional teacher. It is much more important that the instructor in carpentering. for example, at least as regards shopwork instruction, shall be a competent carpenter than that he shall have attended a normal school. Provided he can teach carpentry to beginners, he fulfills the chief professional requirement for a vocational teacher of carpentering. This is the prime requisite and all other qualifications are secondary. He must be of good moral character, and unobjectionable in every respect, but provided always, that he can teach carpentering, he should be judged and certified in other respects as a man, rather than as a professional pedogogue (p. 25).

Further, the framers of the Smith-Hughes Act recognized that the success of this new program of education would depend upon having properly trained teachers to inaugurate and administer the program. They did not believe that existing institutions were training the types of teachers required under the provisions of this new act. Although this act specified that the state board for vocational education was directly responsible for the training of vocational teachers, the majority of the state boards delegated their responsibility to existing state institutions, usually state or municipal colleges or universities.

The prospective trade and industrial teacher may enter vocational teaching either from industry or from the regular preparation system. In either case, trade experience was a prerequisite before a temporary teaching certificate was granted.

Requirement for Vocational Teacher Certification

To meet the increasing demand for teachers in vocational programs, most states adopted requirements for certification that were quite different from their requirements for academic subject teachers. In academic areas at the secondary level, a baccalaureate degree in education is the standard minimum requirement for teacher certification. However, vocational certification at both the secondary and post-secondary levels is based upon occupational competency in the specialty areas, as well as academic accomplishment. In many states, certification of teachers in post-secondary vocational programs is not required at all. Further, qualification requirements for vocational teachers are tailored by each individual state and adjusted to alleviate varying teacher

shortages in those states. Evans (1973), commenting on this situation, stated:

> When there is a shortage of vocational instructors, standards of competence in both subject matter and pedagogy tend to be decreased or postponed. It is typical in most states, for example, to allow vocational teachers in certain fields to begin teaching with absolutely no teacher education. The usual understanding is that one or so courses per year will be completed until minimum standards are reached (pp. 57-58).

Consequently, certification requirements are vastly different from state to state.

Richland and Rosove (1967) conducted a study to determine state certification requirements and needs for teachers in vocational education programs. Of the fifty states which were mailed questionnaires, forty-five states responded. Table 1 illustrates the minimum certification requirements of the forty-five states responding.

The major conclusion of the survey of state certification requirements for teachers in vocational education was that these requirements were not insurmountable barriers to the employment of even military retirees.

Conclusion

Based upon the information reviewed, the most noticeable aspect of state certification requirements in both the secondary and post-secondary levels of vocational education programs was the emphasis upon work or experience rather than formal education for the beginning teacher. The major trend seems to be a demand for occupational competence at the outset, with teaching competence to be developed on an in-service training basis.

TABLE 1

Minimum State Certification Requirements for Teachers

State	Educational Requirement					Occupational Experience Requirement (Yrs.)								
	< H.S.	H.S.	1 yr. col.	2 yr. col.	BA/BS	1	1½	2	3	4	5	5½	6	7	8
Alaska	X								X						
Missouri	X								X						
Nevada	X								X						
Oregon	X								X						
Washington	X								X						
New York		X				X									
Georgia		X					X								
Kansas		X					X								
Nebraska		X					X								
Oklahoma		X					X								
Pennsylvania		X					X								
Virginia		X					X								
Arkansas		X							X						
Indiana		X							X						
Iowa		X							X						
Minnesota		X							X						
South Dakota		X							X						
Arizona		X								X					
Delaware		X								X					
Montana		X								X					
Colorado		X									X				
Illinois		X									X				
Maryland		X									X				

TABLE 1 (Continued)

State	Educational Requirement					Occupational Experience Requirement (Yrs.)									
	<H.S.	H.S.	1 yr. col.	2 yr. col.	BA/BS	1	1½	2	3	4	5	5½	6	7	8
Texas		X									X				
Wisconsin		X										X			
Florida		X											X		
Louisana		X											X		
Maine		X											X		
New Hampshire		X											X		
Tennessee		X											X		
Utah		X											X		
Vermont		X											X		
West Virginia		X											X		
Alabama		X												X	
California		X												X	
Hawaii		X												X	
North Dakota		X												X	
Ohio		X												X	
Rhode Island		X												X	
Connecticut		X													X
Idaho		X													X
Massachusetts		X													X
New Mexico			X						X						
Mississippi				X				X							
Wyoming					X				X						

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VOCATIONAL CERTIFICATION: A NATIONAL OVERVIEW

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Introduction

Background Factors

National emphasis on vocational education has caused personnel recruitment and development to become one of the major areas of concern in the conduct of viable vocational education programs. The fact that the certification of teachers is a prerogative of each individual state in the nation has led to considerable divergence among the various states in the matter of setting teacher qualifications. Add to this the fact that most states have adopted requirements for certification of vocational education professional personnel that are different from their requirements for general education teachers and it becomes apparent that the potential for confusion is great. One must also bear in mind that vocational education operates at both the secondary and the post-secondary levels and that certification practices may be different from one level to the other within the same state. A further aspect that makes a confusing situation more complex is the fact that vocational teachers in reimbursed programs generally are subject to approval by the state board of vocational education. This approval may be independent of certification, may be a condition of certification (or vice versa), and may require qualifications in addition to, different from, or less than those required by the teacher certification agency in the same state.

Certification of vocational personnel has been especially complex because of the diversity of kinds of teachers that have been engaged in the field and because the Smith-Hughes Act specified that only teachers with practical experience be permitted to teach in reimbursed programs. The act further specified minimum kinds of professional teacher training to be completed by vocational teachers. In the main these requirements have largely been applicable to the Trades and Industries area because Agriculture and Home Economics teachers have traditionally become teachers through the four-year college degree route. More recently, business teachers, distributive education teachers and vocational guidance counselors have joined the vocational education teaching profession, but they too have generally been trained in the traditional college manner. Trade and Industrial teachers, and Technical teachers usually have been recruited from the occupation, given some sort of teaching permit and then required to complete teacher training programs of varying kinds. As vocational education has broadened its scope and because new occupations requiring training continually emerge in the labor force, the system for certifying Trade and Industrial teachers has taken on new significance and has been used as the model for certification and/or

approval of many kinds of vocational teachers.

The recent national trend toward combining all kinds of vocational education programs into a commonalities approach both at the teacher training level and at the operating level may cause a gradual change to come about in certification requirements. It will place more emphasis on degree programs for Trade and Industrial teachers, and require more work experience of those who have traditionally received certification upon completion of the baccalaureate degree. The matter of certification of administrators of vocational education programs is also of concern and raises questions regarding whether teachers trained in different kinds of programs will have opportunities to manage programs in their respective fields.

Survey of State Requirements

With this background in mind, a study of the vocational trade and technical teacher certification requirements, and of the vocational administrator certification requirements in the several states and territories, was undertaken by the writer in the fall of 1969. For the next three years information was acquired from fifty states regarding these requirements. This information has been analyzed and interpreted and forms the basis for the information that follows in this report. It must be noted that much of the information received was subject to interpretation, and the possibility exists that some interpretations have been inaccurate. Recognition must also be given to the fact that changes are continually being made in the laws, policies, and interpretations in each state. It was hoped that some common denominators could be found in certification requirements that would provide information useful to those teachers and administrators who move across state lines. However, there seems to be no single aspect that is constant across all states; and while there are commonalities and similarities among the states it is impossible to generalize a single requirement across all states. About all that can be assumed with any degree of certainty is that vocational teachers in reimbursed programs in all states must possess some amount of work experience and are supposed to have been exposed to some teacher education experiences.

Comparing the requirements for vocational certification with those required for general education personnel reveals that there are major differences between the two systems. In the general education areas a baccalaureate degree is the standard minimum requirement for teacher certification, and a master's degree, or equivalent, in an approved program in school administration is generally the minimum standard requirement for certification as a school administrator. However, vocational teacher certification at both the secondary and post-secondary level is based upon occupational competency in the specialty areas. In addition, a varying amount of academic accomplishment is also required. In many states certification of teachers in post-secondary technical and trade programs is not mandatory, but in these

cases the teacher may be required to meet certain qualifications before the program in which he teaches is approved for reimbursement.

Vocational education administrator certification regulations vary from qualification requirements of less than a baccalaureate degree to programs requiring a master's degree plus additional academic work, and some states do not differentiate between the vocational and general education administrator. Further, qualification requirements for vocational education professional personnel are designed by each state and then adjusted to accommodate varying personnel shortages in those states. Consequently, certification and approval requirements are vastly different from state to state. Just how vast and how different these requirements are may be seen in the information that was gleaned from the fifty states that responded to a request for secondary school teacher requirements. Forty-eight of these states also provided information regarding post-secondary teacher requirements, and forty-nine states furnished materials relative to their requirements for school administrators.

Minimum State Requirements for Beginning Teaching in Secondary Trades and Industries

Academic Requirements--Provisional Certification

1. Thirty-eight states offered provisional certification of teachers who do not meet the requirements for standard certification. In all of these states, sufficient time was allowed for teachers to meet the requirements for standard certification while teaching under the provisional certificate.

    a. Thirty-two of these states made renewal of provisional certificates contingent upon completion of specified course work during the term of the certificate.

    b. The other six states based certificate renewal upon satisfactory teacher performance or emergency teacher shortage.

    c. Twenty-six states offering provisional certificates required only a high school diploma to fulfill academic requirements for initial certification.

    d. Five states required completion of a short teacher training course in addition to the high school diploma.

    e. Seven states required varying amounts of college-level course work as a prerequisite for provisional certification. In all seven, the required courses were in pedagogy and not in technical areas supporting an occupational specialty.

2. Twelve states did not indicate the availability of provisional certificates.

a. Six specified a high school diploma as sufficient academic preparation for full, nonprovisional certification.

b. Six states required the completion of a specific amount of college-level course work for standard certification.

3. None of the fifty states included in the study indicated an absolute requirement of a baccalaureate degree as minimum academic preparation for the provisional certification of trades and industries teachers.

Academic Requirements--Standard Certification

1. A total of sixteen states required baccalaureate degrees for full, nonprovisional certification. In all sixteen, teachers were allowed to fulfill this requirement while teaching under a provisional certificate.

2. Twenty-two states required some college-level course work to fulfill academic requirements.

a. All but two of these states allowed this requirement to be met while teaching under the provisional certification.

b. Three of these states also required a school-sponsored pre-service teacher training course to qualify for standard certification.

3. Three states required a high school diploma plus a pre-service teacher training course for standard certification.

4. Nine states required only a high school diploma to meet the academit requirements for full standard certification.

Specific Course Requirements--Standard Certification

Thirty-three states listed specific college course titles or course descriptions in their requirements for standard certification. The course most often specified was "Methods of Vocational Teaching," while "Vocational Guidance" and "Tests and Measurements" were specified the least number of times. The most common practice, however, was to indicate broad course areas without specific mention of course titles or content.

Work Experience Requirements

Work experience requirements for secondary trades and industries teacher certification not only varied greatly from state to state, but also varied within a state depending upon the academic accomplishment

of prospective teachers. For example, one state reduced the work experience requirement from three years to two years for a teacher holding the master's degree. On the other hand, two states considered work experience as fulfilling college training requirements. One offered this on an individual evaluation basis, and the other specified that each two years of work experience would be considered equivalent to one year of college.

Various methods of determining work experience requirements among states made it impossible to relate this factor to certification per se or to state categorically how much work experience is required in a given state. It appeared that work experience was usually a prerequisite to provisional certification of teachers. If teachers held the standard certificate, the work experience requirement became a matter for program approval. The variety of approaches may be seen in the following:

1. The lowest work experience requirement of all the states in this study was 2000 hours during the past ten year period. Technical school graduates in this state were allowed to waive two-fifths of this requirement leaving a minimum work experience requirement of 1200 hours.

2. One state did not require a specific amount of work experience. Trade competency in this state was determined by demonstration and examination.

3. A rather high expectation was shown by one state that had a requirement of eight years total work experience, four of which must have been at the journeyman level. Technical or trade school credit could reduce the total to six years, but the four-year journeyman level requirement remained the same in all cases.

4. Several states reduced the employment requirement for persons who held state licensure in the trade to be taught. Two states waived all work experience requirements for persons of this status.

5. Three states required prospective teachers to successfully complete trade competency examinations. These exams were in addition to a specified number of years work experience.

6. One state specified "journeyman status" as the work experience requirement, rather than a certain number of years beyond the period of learner training.

7. All states that differentiated between "learner period" and "beyond learner period" or "journeyman level" would accept trade or technical school training on the same basis as apprenticeship training. However, in no instance was formal school training accepted in lieu of journeyman work experience in those states where journeyman experience was required.

Minimum State Requirements for Beginning Teaching in Post-Secondary Trade and Technical Programs

Due to the differences in scope and emphasis between trade and technical programs, requirements for teachers in these two areas were not the same in many states. Therefore, post-secondary vocational teacher requirements in these two areas are presented separately.

Academic Requirements--Trades Programs

1. Thirty-one states considered a high school diploma as meeting the minimum academic requirements for post-secondary trades teachers.

   a. Twenty states based contract renewal upon completion of teacher education courses during the term of the previous contract. The types and credit hour requirements of these courses varied from state to state. One state indicated deferral of this renewal requirement in the case of a critical teacher shortage; however, advancement in salary was limited under this condition.

   b. In eleven states, no further academic preparation was required for continuation of teacher employment.

2. Seven states required short, pre-service teacher training courses in addition to high school completion. These varied in length from fifteen clock hours to 260 clock hours.

3. Seven states required some college preparation prior to teaching and specified that the courses be in areas of vocational teaching.

   a. One state required two years of technical training in the specialty area.

   b. Another state required some training in both professional teaching and technical areas. Five states required college-level course work in vocational teaching areas only.

4. Two states required a baccalaureate degree for teachers in post-secondary trades programs. Graduates were preferred who had majored in industrial education.

Work Experience Requirements--Trade Programs

Work experience requirements for post-secondary trades teachers generally paralleled those for secondary trades and industries. In most instances, these experience requirements did not vary as much with different academic achievement levels, as was the case with secondary trades and industries programs.

Academic Requirements--Technical Programs

1. Thirty-seven states indicated the same academic requirements for technical program teachers as for trade teachers.

2. The remaining eleven states indicated greater emphasis on formal school training in the technical areas to be taught, and not in professional teacher education courses.

   a. Seven of these states required technical school training.

   b. Four states required baccalaureate degrees in the technical subject matter areas to be taught. Two of these states specified some pedagogy courses in addition to the technical courses.

Work Experience Requirements--Technical Programs

1. Thirteen states indicated work experience requirements for technical teachers different from their requirements for trades teachers. In all thirteen the time requirement was less for technical program teachers.

2. One state waived all required work experience upon successful completion of a competency exam.

3. Four states that had specific work experience requirements for trade teachers had no specific requirements for technical teachers.

4. One state required only that the person be "outstanding in his field."

5. Technical occupations that required state licensure generally required this licensing of teachers in addition to the work experience requirements specified by the state.

Minimum State Requirements for Local Vocational Director

In some respects it was easier to ascertain state requirements for the local director than for teachers in vocational programs. All states had some specific requirements, although one state reported, "if a community feels their vocational education program has developed to the point that there is a need for a local director and/or supervisor, they should contact the Division of Vocational Education for further information."

Academic Requirements

1. Forty-eight states identified qualification requirements for local vocational directors.

a. Twenty-three states indicated that the master's degree or equivalent was required.

b. Eight states had the requirement of the bachelor's degree plus additional course work.

c. Ten states required only the bachelor's degree.

d. Seven states had a requirement which might not require the bachelor's degree depending on the previous vocational service of the candidate. The trade and industrial service areas would generally be the vocational services not requiring the bachelor's degree.

2. Fourteen states required the completion of an approved program in school administration, and nine of these apparently did not differentiate between academic and vocational administrators. Of those states reporting a degree requirement, only nineteen identified the degree major. The majors listed were primarily in the areas of educational administration and vocational service. The states not listing degree majors generally listed courses or broad course area requirements that fall within the areas of vocational and/or educational administration. Some course areas that were also listed as requirements were: Principles and Philosophy, Staff Development, Program Planning, Legal and Financial, Human Relations, Research, Evaluation, and Areas of Specialty. One state was more specific in listing requirements, naming course areas and credit requirements. The most common practice for listing academic requirements, however, was to indicate degree requirements and broad course areas without specific mention of course titles or content.

Teaching and/or Supervisory Experience

1. Eighteen states had a vocational education teaching experience requirement. This experience requirement varied from one to five years, with a mean of 2.82 years.

2. Seventeen states required a combination of teaching and supervisory experience in vocational education. This experience requirement varied from two to five years, with a mean of 3.8 years.

3. Five states reported an experience requirement for supervisory employment in vocational education. This experience requirement varied from one to three years, with a mean of 2.4 years.

4. Five states reported a teaching experience requirement but did not specify that the teaching experience be in a vocational service area.

5. Three states did not indicate a teaching experience requirement.

Experience in an Occupation other than Teaching

In reporting requirements for the position of local vocational

director, most states did not specify experience in an occupation other than teaching. To acquire data on experience in an occupation other than teaching it was assumed that, if the state required a teaching certificate as a part of the administrator's qualification requirements, the work experience required in order to obtain the specific teaching certificate would be the work experience criteria for the administrator's qualification requirement for that state. An analysis of the work experience prerequisite for the required teaching experience in those states that had a requirement of prior teaching indicated that the range for occupational experience was from one to six years, with a mean of 2.44 years. It should also be noted that in some states this experience requirement varied depending on the vocational service area. However, since nine states did not differentiate between general and vocational education administrators, it is probable that in these states there are local directors of vocational education who have no work experience other than teaching, and this teaching experience is outside the field of vocational education.

Concluding Remarks

If there are to be national goals for vocational education, then it would seem that there should be some national standards for teachers who are collectively charged with meeting these goals. Such is not the case. Not since 1917 has the vocational teaching profession received any guidance concerning qualifications for teachers, and with the passage of time these guidelines have become less and less distinct. The fact that federal money is expended for vocational instruction should be reason for insistence upon some uniformity in the quality of instruction which this money buys. It may be argued that minimum qualification standards for teachers do not assure quality education programs; but this argument could just as easily be applied to those who work in any occupation. Perhaps those who administer federal vocational education funds should adopt the view that teachers of those students receiving training in occupations that are involved in interstate commerce should be subject to some uniform national teacher qualification criteria. This idea probably would not be well received by many state officials, particularly those whose major effort in vocational education is tied to the public secondary schools. However, recognition must be given to the fact that increasingly more vocational and technical education is being offered outside the public schools and that teacher qualifications in these programs may be nonexistent. Without some professional teacher qualification criteria the possibility exists that public funds could be spent to employ teachers whose sole qualification might be membership in the "right" political party.

It is no secret that vocational education has not received the national emphasis and recognition that should logically flow to what is undoubtedly one of the most important educational endeavors of the nation. It may be that the wide diversity of teachers in the field is detrimental to the development of a forceful and consistent national

image for vocational education. A comparison between the required qualifications of any classification of specialized academic teachers as a national group and vocational educators might provide some clues to understanding why the national efforts in physical education, science education, and other kinds of education seem to be far ahead of vocational education.

A nationwide effort in vocational education can be successful only to the extent that local programs succeed. It is generally believed that the success of local programs depends upon the quality of leadership that is displayed by local administrators. If this is the case, the situation in several states regarding the qualifications of local directors of vocational education must be cause for concern. Situations exist where vocational teachers must have much work experience and are required to meet only minimal academic criteria, while at the same time directors of vocational programs are required to complete advanced academic work with minimal teaching and work experience required. This may result in a system where teachers have little opportunity to attain leadership positions in their own profession. The possibility that a director of vocational education could serve in that position having had neither occupational work experience nor vocational teaching experience raises some doubts concerning the capability and motivation of that person to promote and expand vocational education. Perhaps this is another contributing factor to the lukewarm support vocational education has received on state and national levels. Any national assessment of vocational education and its programs will be meaningless unless these variations in teacher and administrator qualifications are taken into account state-by-state.

Federal agencies and national professional education organizations that are concerned with vocational education would be well advised to make the attempt to provide some uniform minimum qualification teacher and administrator guidelines to each of the states. This is not a new idea, since the framers of the Smith-Hughes Act recognized that the federal government should approve minimum guidelines for the states in order to assure competent "teachers, supervisors, or directors" of vocational subjects. A federal requirement that states provide, in their plan for vocational education, unequivocal statements that set forth the qualifications of professional personnel, so that anyone who reads may understand what is required, should be the first of these guidelines. While this would not assure uniform, high-quality, successful programs across the nation, it would be a step toward building a national corps of professional vocational educators who could speak and act with assurance while attempting to achieve national vocational education goals.

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VOCATIONAL TEACHER CERTIFICATION IN PENNSYLVANIA

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Introduction

The certification of vocational teachers, which is an integral part of the all teacher certification in Pennsylvania, is an identifying characteristic of a profession. The educational profession is somewhat different from other professions in using the terminology of certification. Licensing is the term more commonly used by the professions as a public declaration of ability to render professional service (Blaugh 1955). The medical profession was the first to require a license for practicing.

The usual pattern was to have the individual states assume responsibility for professional licensing. Naturally, this assumption of responsibility was preceded by the passage of laws and regulations by the state. State laws requiring licensing were ineffective between the Revolutionary and Civil wars, but soon after the latter the developing professional associations contributed to a changing public attitude toward licensing (Blaugh 1955). The establishment of appointed state agencies to determine requirements, judge qualifications of individuals, and issue licenses became the standard practice. The protection of public welfare and of the safety of the public have evolved as equal in importance to the ethical rendering of professional service as justification for licensing of professionals.

The public school system operates as a monopoly. Mandatory attendance laws require that all children attend a school, and the public operates schools for these children. It is possible for children to satisfy this mandate at a non-public school, but attendance at some school is required. The vast majority must attend the only public school in the area. Therefore, the attestment of competency of the educators by the issuance of a professional license is vital to public welfare and confidence. The requirements for issuance are of two general types: general requirements such as age and citizenship, and educational requirements detailing the program of preparation that must be completed to qualify (Kinney, 1964 p. 3).

The Commonwealth of Pennsylvania enacted legislation effective in 1911 (Department of Education, 1968 Section 1201) that required all teachers to have a certificate. The State Board of Education was designated as the agency to establish the requirements for a certificate and to be responsible for issuing the certificate. The certification of all teachers was assumed as a responsibility of the state at that time, and all certificates for all teachers continue to be issued by the Commonwealth of Pennsylvania. No other agency or institution has the prerogative of issuing a certificate to any person.

The requirements for teacher certificates did change, from those that were established in 1911, through the succeeding years. The responsibility for issuance of the certificates, however, did not change in that individuals would complete the necessary prerequisites and then apply to the Department of Education for the issuance of the certificate. The usual method of meeting the requirements was the successful completion of a preparatory program at an institution of higher learning. Upon completion of this program the individual would submit an application and a copy of the transcript to the Department of Education. The responsible individuals in the Department of Education would review the materials submitted and on the basis of the evidence presented issue a certificate to the individual. If the review of credentials was determined to be not satisfactory, the individual would then be advised as to what necessary additional requirements would have to be completed before the certificate could be issued.

Institution Approval

In the early 1960s the personnel in the Division of Teacher Certification of the Department of Education concluded that the preparing institutions might be more knowledgeable of the specific requirements for a successful teacher. It was self-evident that the preparing institutions were better informed about the content of courses and the value of certain courses in teacher preparation, and were better acquainted with the individuals completing the preparatory programs. The Division of Teacher Certification proposed to the institutions of higher learning in the Commonwealth that the system be changed to one of institution approval for teacher certification. This plan required that the preparing institutions review the credentials and transcripts of the individual and make the determination as to his suitability for a certificate. The institution then recommended to the Division of Teacher Certification that a certificate be issued, and the Division of Teacher Certification, on the basis of this recommendation, would issue a certificate. An integral part of the institution approval plan was the review of the preparatory curriculums by the Division of Teacher Certification. Teams of experts in teacher education were assembled at the various institutions, and the preparatory curricula of those institutions were subject to an analytical review. These curriculum reviews are completed at five-year intervals. On the basis of this review, an institution is then approved for the preparation of teachers in certain subject areas. This cooperative plan continues in operation, and all initial certificates are issued by the Division of Teacher Certification upon the recommendation of an approved institution. There are provisions for individuals prepared out of the state and for those who possess certificates in other states and wish to obtain a certificate in Pennsylvania.

The Pennsylvania State University was approved to recommend people in Vocational Agricultural Education, Vocational Home Economics Education, and Vocational Trade and Industrial Education. The University was also approved to recommend people in many of the non-vocational teaching

fields. The College of Education at Penn State was not approved to recommend people in Vocational Distributive Education nor in Vocational Business and Office Education.

Degree Certificate

The most recent revision of the certificate regulations of the State Board of Education of Pennsylvania are contained in Chapter 49 under the title of Certification of Professional Personnel. This revision became effective in October 1972. Section 49.12 states that every professional employee certificated to serve in the schools of Pennsylvania shall (1) be of good moral character, (2) show a physicians' certificate that the application is neither mentally nor physically disqualified for successful performance of the duties of a teacher, (3) be at least eighteen years of age, and (4) be a citizen of the United States. It is readily recognizable that these requirements conform to the general requirements mentioned above.

The educational requirements required for the issuance of a certificate are stated in section 49.71 of the regulations. This section states:

> An applicant for a certificate shall have completed, in addition to all the legal requirements, a program of teacher education approved by the Secretary of Education and shall have the recommendation of the preparing institution. The program of teacher education must include sufficient employment experience beyond the learning period to establish competency in the occupation to be taught. In addition to completion of the wage-earning experience in an occupation, it is necessary to successfully complete an Occupational Competency Evaluation.

It is evident from the above, that the subject area preparation is not a part of the formal institutionalized instruction. All certificates in Pennsylvania are issued on two levels. The first certificate is issued on a provisional level which means that this certificate is valid for a period of three years of teaching. At the end of that time an individual can renew this certificate for an additional limited number of years of teaching or the certificate can be made permanent. It is mandatory that some action be taken at the end of the three years of teaching because the provisional certificate expires at that time and the teacher no longer possesses a valid certificate.

The Instructional I Certificate is issued to individuals who have completed the baccalaureate degree and who have been recommended by the College of Education to the Division of Teacher Certification as eligible for the Instructional I Certificate. This provisional certificate is valid for a period of three years of teaching and may be renewed upon the completion of three years of successful teaching and twelve semester credit hours of collegiate study. The collegiate study that is

acceptable for renewal of this certificate must be earned at a state approved-baccalaureate degree granting institution. Programs of inservice-education that are approved by the Secretary of Education in Pennsylvania may also be completed to achieve the required semester credit hours. All credits must be earned subsequent to the conferring of the degree.

The Instructional I Certificate may be converted to an Instructional II Certificate, which is a permanent certificate. The qualifications for the permanent certificate are that an individual must have completed three years of satisfactory teaching experience on a provisional certificate, and this fact must be attested by a superintendent of schools. In addition, the applicant must complete twenty-four semester credit hours of collegiate study at an approved baccalaureate degree granting institution or through approved inservice programs. The current philosophy is that the permanent certificate is valid for ninety-nine years of teaching.

Non-Degree Certificate

A second category of certification is the non-degree certificate. This is particularly applicable to teachers of vocational education. The educational requirements for this certificate as stated in section 49.131 are:

> An applicant for a certificate shall have completed, in addition to all legal requirements, a program of teacher education approved by the Secretary of Education and shall have received the recommendation of the preparing institution.

The Vocational Instructional I Certificate is a provisional certificate. The requirements for this certificate state that an individual shall have sufficient employment experience beyond the learning period to establish competency in the occupation to be taught. In addition to having completed the wage-earning experience in an occupation, it is necessary to successfully complete an Occupational Competency Evaluation. These two requirements acknowledge, as did the Instructional I Certificate, that the subject area preparation a vocational teacher may require is not always readily available as part of a formal institutionalized educational system. Therefore, it recognizes the possibility of gaining subject matter competency through actual experience in that particular occupation. The other requirement for the Vocational Instructional I Certificate is that an individual must complete eighteen semester credit hours in an approved program of vocational teacher education. These eighteen semester credit hours are subdivided into twelve credits in professional subjects including student teaching and six credits of general subjects. This certificate also remains valid for three years of teaching. It is comparable to the degree certificate in that it to may be renewed or made permanent at the end of three years of successful teaching. The renewal can be accomplished by the three years of successful teaching, as rated by an administrator, and the completion of an

additional eighteen semester credit hours of study in an approved program.

The Vocational Instructional II Certificate is a permanent certificate. A teacher can qualify for this certificate by the required three years of satisfactory teaching experience and the completion of a total of sixty semester credit hours in an approved program. These sixty credit hours are subdivided between professional courses, general subjects, and electives in either or both of those categories. The permanence of this certificate can also be recognized when it is noted that it is also issued for ninety-nine years of teaching.

Intern Certificate

A third type of certificate which is available is a certificate titled Intern. There are numerous reasons why a provisionally certificated teacher might not be available to a school district at any given time. Therefore, since every teacher must have a certificate, a compromise had to be made so that emergencies of this type could be satisfactorily resolved.

There were several reasons for initiating this kind of certification. Prior to the time when the Intern Certificate was approved, the only way that a teacher who was needed by a school district could fill that position was through an Emergency Certificate. The Emergency Certificate, though it still exists, was not a satisfactory arrangement for either the individual, the school district, or for the profession. So the Intern Certificate, which is just what the name implies, was established as a temporary kind of certification. There are several prerequisites for the issuing of this certificate. These are listed in sections 49.91, 49.92, 49.151, and 49.152 of the regulations. A summary of these sections is: The Secretary of Education may issue an Intern Certificate for teaching in the public schools of the Commonwealth to an applicant who, in addition to all legal requirements, is enrolled in an approved intern program and is recommended for said certificate by the institution holding such approval. This individual must have assurance of employment by a school district, and the Intern Certificate is issued to that individual to fulfill that one position only. The additional requirements for the issuance of the Intern Certificate to a teacher of vocational education states: (1) The individual must present evidence of sufficient employment experiences beyond the learning period to establish competency in the occupation to be taught. (2) Shall have successfully completed the Occupational Competency Evaluation.

This certificate is issued for whatever period of time is necessary for the individual to qualify for the provisional certificate, but in no case shall this time period exceed three years.

Summary

The Division of Teacher Certification has standarized an application

form that is to be used in application for all teaching certificates. This form has the title of Application for Professional Personnel Certificate and the number DEHE-280(9/72). This form is in two parts, one part being the application itself and the other part being the instructions for completion of the application. All applications for either the Intern, the provisional, or permanent type certificates must utilize this form.

The responsibility for issuing certificates to teachers continues to be a function of the Commonwealth of Pennsylvania. The approved institutions are a part of this process.

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VOCATIONAL SUPERVISOR AND ADMINISTRATOR CERTIFICATION IN PENNSYLVANIA

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The previous paper by Doctor Brantner thoroughly covered the steps normally taken to obtain initial teacher certification through either the degree, the non-degree, or the intern route.

This paper deals with problems of certification as they relate to coordinators and directors. It is questionable why these classifications have been identified for special attention, since it is obvious that the causes of certification problems related to coordinators and directors are common to all areas of certification--that is, the lack of information and of sources where assistance can be obtained.

A working relationship exists between the Bureau of Vocational Education and the Bureau of Teacher Education and Certification to minimize problems. This relationship is shown graphically in Figure 1. Certification activities housed in the Bureau of Vocational Education principally are those of providing information and assistance to prospective teachers, teachers having personal certification problems, and administrators with problems within their faculty organization. The Bureau of Vocational Education provides input into the revision or development of new standards, regulations, and guidelines for review and approval by the State Board. There is also activity in working with the vocational teacher education institutions in the development and administration of the occupational competency testing program, which is an important segment of the certification process.

Shortly after being assigned to certification as an area of responsibility in the Bureau of Vocational Education, an urgent need arose to have some of the important information pertaining to certification readily available. To satisfy this need a "Ready Reference to Certification Regulations for Vocational Education" was assembled which shows the vocational education career ladder via the intern route, a summary of Chapter 49 of State Board Regulations, the full text of Subchapter C, Vocational Education Certification of the State Board Regulations, and the full text of the State Board Regulations which became effective October 7, 1972. A complete copy can be obtained by contacting the bureau office.

For the same reason, and in similar manner, a second useful source of reference was prepared which is identified as a "Ready Reference to Basic Requirements for Certification to Enter as a Teacher in Vocational Education Programs in Public Secondary Schools." The basic certification

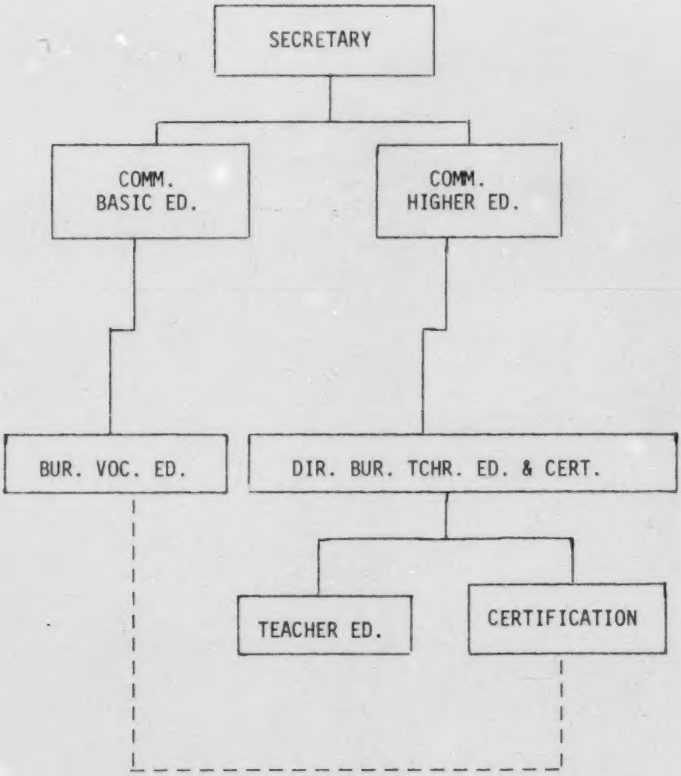

Figure 1
BUREAU RELATIONSHIP

requirements provided in this reference relate to Agricultural Education, Business Education, Distributive Education, Guidance and Guidance Services, Health Occupations Education, Home Economics Education, and Trade and Industrial Education. This too is a valuable reference tool. It can also be obtained by contacting the bureau.

Other materials relevant to certification and which can serve as part of a reference library are: (a) program standards for vocational education which are a part of the Department of Education "Policies, Procedures and Standards for Certification of Professional School Personnel," (b) "Operating Policies and Guidelines" which have been developed by the Bureau of Teacher Education and Certification. These are the policies followed in administering the less specific regulations

established by the State Board. Another helpful publication is "Ready Reference to Vocational Education Course Description Code Numbers, Certification Titles and Bureau of Certification Area Listing Code Numbers." This reference has been prepared to show the exact relationship between course code numbers and certification titles. A problem frequently created is that the local administrator does not relate the correct code number to a course and in a lesser number of cases has an improperly certificated instructor for the course.

Many of our problems in certification come from persons having misinformation, lack of information, or misunderstanding of the regulations and processes. For example: There are some people who would welcome eliminating the coordinator level of certification because in their opinion coordinator activities in a school are not clearly defined and what he really does should be done by a person holding supervisor certification. This feeling has caused a number of our vocational people to take a defensive position whenever the occasion warrants. An occasion did present itself recently. It began when someone saw a copy of a recently developed operating policy which said administrative certificates will be granted for four types of positions: Principal, Assistant or Vice Principal, Director of Vocational Education, and Assistant Director of Vocational Education. With so many people erroneously thinking a coordinator is an administrator, and with this title not appearing in the policy, telephones began to ring carrying inquiries as to why the coordinator's position has been eliminated. Obviously, the coordinator title did not appear in this policy statement because it is not an administrative certificate title.

The coordinator functions as a contact between the school and industry. He is actively communicating with organized labor on matters related to apprenticeships. He is the school professional responsible for assuring that cooperative students are achieving the educational experiences totally representative of the occupation. The coordinator serves in a supervisory capacity.

The supervisor is totally involved with instruction. The professional in this position is responsible for the instruction program. The day-to-day instructional activities as well as innovation and promotion of new activities are his primary responsibilities. This concern for instruction logically involves the teachers; the supervisor is involved with inservice education for teachers and the overall leadership of the teaching staff.

All of the many ongoing activities in an operating school system function under an educational administrator. The Director of Vocational Education is the recognized administrator of a program of vocational education. The scope of his responsibilities must necessarily bring him in contact with people in the system. He cannot be oblivious of teachers and students, but his primary concern is with finance, facilities, management, relations with other government agencies, and community groups.

Certification requirements pertain to the specific job classification on staff and faculty. There are no more problems involved with the certification for coordinators, supervisors, or directors than there are for teachers. The basic principles of certification are the same for all professional positions, but each certification is a recognizable and separate entity.

OCCUPATIONAL COMPETENCY EVALUATION

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Competency is a term used quite extensively in education today. Competency can be defined as ability, skills, and fitness. We hear and see considerable emphasis on competency based instruction. Teachers and administrators alike are rated on the basis of competency. The report of the Citizens Commission on Basic Education (1973) recently submitted to the Governor contains a number of references to competency. For example: "Student progress toward graduation should be measured in terms of actual skills and knowledge acquired--not by the completion of arbitrary numbers of courses and years." Another reference in the report on the chapter on curriculum calls for the state board to adopt "Learning Outcomes" as guides for designing curriculums and to require minimum competency levels.

The concept of competency is no stranger to vocational education. Competency evaluation as it relates to the occupation to be taught has been an essential and necessary part of vocational education's certification program for more years than many of us care to remember.

Authorization

Authorization to conduct the Occupational Competency Evaluation Program is granted to those teacher education institutions offering curriculums in vocational teacher education through methods and procedures established and administered by the Bureau of Vocational Education, Department of Education, in Harrisburg (1970).

Purpose

The purpose of the Occupational Competency Examination, a part of the total evaluation program conducted by these institutions, is an opportunity for the applicant to exhibit the skills and knowledges of the specific trade. It provides an opportunity to verify the minimum level of competency on the part of the applicant prior to being issued a certificate as a public school vocational teacher. Since there are frequent misinterpretations as to the purpose of the competency examination, it is essential to point out that the competency examination in no way evaluates a person's ability or potential ability to become a successful teacher. It is simply a means of verifying minimum levels of competency as they relate to the specific occupational area.

Eligibility

Eligibility to participate in the competency evaluation program consists of three basic requirements. First, the applicant must be a high school graduate or possess a GED equivalency diploma. Second, the applicant must verify sufficient wage earning experience beyond the learning period in the occupation to be taught. Third, the applicant must have properly completed the necessary application and all supporting data.

Application and Instructions

The application asks for a listing of all education, beginning with high school graduation and continuing through higher education, including specialist types of schools, community colleges, baccalaureate programs, and any other forms of education. Education must be verified by transcripts or diploma photocopies.

The reverse side of the application asks for information relative to occupational experiences, such as the title of the position held, the nature of the experiences, as well as the time elements involved with the specific employer and occupation. This is an extremely important part of the application. In fact, applicants should be encouraged to be very detailed in relating the nature of their experiences. It is necessary for the evaluator to relate these experiences to the course to be taught in order to bring about a fair and just evaluation of the applicant. Many times applicants cannot find room enough on the application to include their experiences as they would like to report them. In such situations we suggest that they prepare a chronological development of their experiences on an additional sheet and attach it to the application with a reference on the application to the specific attachments. Since this application and all the supporting data serve as the foundation for a teaching certificate, which is a legal document, it becomes necessary for all of this information to be verified by letters from employers as well as sworn to before a notary public. All supporting information should also contain the notary seal.

Examinations

Competency examinations are in two parts. First, the written part, usually administered in the morning of the examination day, consists of upwards of 300 test items of the multiple choice variety and are extremely objective in nature. While the written examinations do not tend to probe deeply into any specific areas of the occupation, they are exceptionally broad in their coverage. The time limit of three hours for the written examinations, coupled with the number of questions to be answered and the breadth of fields covered, tend to make these devices rather difficult for those except the more knowledgeable persons in the occupation. The written examinations are administered by the

program examiners and upon completion are returned unscored to the institution responsible for the examination. The institution scores and evaluates the examination results.

The second or performance part of the examination is designed to sample the examinee's skills in as many areas of the occupation as is possible in the four hours allocated for the examination. Time limits are set on the several parts of many of the performance examinations. As with the written examinations, the limited time allotted, the number of skills tested, and the breadth of fields covered tend to make these examinations rather difficult for those except the more skilled persons in the occupations. The performance examination is administered in the afternoon of the examination day and is evaluated by means of a rating scale used by the examiner. The examiner's evaluation of the applicant's speed, manipulation, techniques, emotional characteristics, safety, neatness, and accuracy are weighed quite heavily in making a final determination or recommendation on the applicant's performance. The examiner's evaluation and rating of the performance examination is then returned to the institution responsible for administering the examination and the final evaluation of the applicant's performance is made.

If it is apparent in either the written or performance examinations that the examinee definitely does not show competency or skill in the occupation field, the recommendation for a second opportunity will be denied.

Examiners

An examiner is selected on the basis of his being a certified teacher and having been recommended by his supervisor as a competent teacher in his respective field. The examination sites are selected on the basis of sufficient and up-to-date facilities, equipment, tools, and materials characteristic of the specialized occupation. Many times consideration is given to the geographic location of the majority of applicants for the specific occupation in order to minimize travel. In no case do we schedule an examination in the school system where the applicant is employed.

Re-examination

In the case of an unsatisfactory rating it is possible that the examinee could be recommended for a re-examination. This being the case, the applicant must do four things:

1. Submit a letter requesting a re-examination.

2. Verify an additional 2,000 hours of approved wage-earning experience in the occupation for which the examination is being requested.

3. Submit a second fee of $25 (or the prevailing fee at the time of submitting the request).

4. Arrange for an interview with the program coordinator at the institution responsible for the program for purposes of discussing the applicant's participation in a future examination.

In the case of the second unsatisfactory evaluation, the applicant will be denied opportunities for subsequent examinations. If, however, the applicant chooses, an appeal can be filed for a review of the examination results.

During the calendar years of 1970, 1971, and 1972, Penn State conducted approximately 100 competency examinations per calendar year with an unsatisfactory rate of approximately 28 percent. During 1973 Penn State conducted 63 Occupational Competency Examinations with an unsatisfactory rate of approximately 23 percent.

Fees

The fee for the examination at Penn State has been $25 for a number of years. A check or money order in this amount must accompany the application for admission to the competency program. At the other institutions, however, the fee could vary. This amount has been levied to help offset the cost of operating the program and to impose upon the applicant a feeling of responsibility for preparing for the examination and for keeping the test date. It is recognized that the fee cannot and is not intended to support the total cost of the program. It is conceivable that this fee could be increased to the point where the program would become self-supporting at some time in the near future.

Examination Schedule

Examination dates are scheduled twice a year, once in the fall and once in the spring. In the case of Penn State's examinations they usually fall on the fifth Saturday of the fall and the spring terms. In order to arrive at the precise date, consideration is given to major sporting events, including hunting and fishing seasons. It is also necessary to establish a cut-off date for accepting applications for the program. Usually this cut-off date is five weeks prior to the examination date. There are, however, situations demanding that examinations be given at times other than the usual fall and spring testing dates. This occurs when a teacher is employed without having first completed the Competency Evaluation and it becomes necessary for this particular person to obtain a valid teaching certificate and be placed on the payroll in the form of contract so that he or she can receive the usual benefits that accompany a contracted teacher's employment. To establish such an emergency examination date would require approximately thirty

days after receipt of the completed application and all supporting data, including a letter from the applicant's administrator indicating assurance of employment pending satisfactory completion of the examination.

Review of Credentials

In some occupational areas there is no competency examination. This necessitates a review of credentials. The review of Credentials Committee is established and its members appointed by authority of School Administrator's Memo S-37, dated May 20, 1971, and consists of a group of usually five or possibly six persons. The committee can include one or more members from outside the field of education with expertise in the specific occupation being reviewed. In cases of a review of credentials, the applicant would submit the application and all supporting data as it would be submitted if the examination were actually to be administered.

Licensure Occupations

In occupations requiring a state or federal license, a valid license in the specific field will be accepted as satisfactory completion of the competency examination, not necessarily, however, as satisfactory completion of the total evaluation program. In other words, sufficient wage-earning experience beyond the issuance of the license is necessary. "Sufficient" in this case usually implies two years of wage-earning experience.

Guidelines for Interpreting Experience

A memo, issued by the co-chairman of the Department of Vocational Teacher Education, titled "Occupational Experience Guidelines" (December 14, 1973), is in the Appendix. The intent and purpose of these guidelines is to interpret the phrase "sufficient employment experience beyond the learning period." Prior to October 1, 1972, this requirement meant, in no uncertain terms, "a minimum of two years of wage earning experience beyond the learning period."

I feel it extremely important to elaborate on several important points at the top of page 2 of the memo. The experience must definitely be in the occupation to be taught; the experience must be broad and comprehensive in nature rather than a specialty within the specific occupation; and the experience must have been completed within a period of ten years immediately prior to the examination date. To people engaged in the rapidly expanding, highly technical field of vocational education, these three basic guidelines cannot be overemphasized.

Other guidelines indicate those experiences that can be considered toward satisfying the learning period requirement. Military experience and part-time work experience should not be overlooked and are defined

on pages 2 and 3. One final point of emphasis worthy of mention is that work experience used in verifying eligibility for one occupation cannot be used in verifying experience in a second occupation.

Experience--Relevant Study

In March 1973 Mrs. Pat McAlister, then a graduate student at Penn State, published the results of a study entitled "A Study of Occupational Experience of Individuals Who Have Successfully Passed the Occupational Competency Program Administered by the Department of Vocational Education at The Pennsylvania State University."

The efforts of Pat's study were based on the premise that occupational experience has, for a good many years, been a prerequisite for certification as a vocational-industrial teacher. It was felt that unless they had sufficient occupational experience, such teachers could not transmit to their students the knowledges, skills, and working conditions of industry.

Therefore, the question arises as to how many years of occupational experience are sufficient for vocational-industrial teachers who require state certification.

The problem was an attempt to determine the number of years of occupational experience accumulated by individuals who had successfully participated in the Occupational Competency Evaluation administered by the Department of Vocational Education at Penn State between the years of 1962 and 1972.

My reason for referring to this study is simply to lay the foundation for a statement from the "Conclusions and Implications," which reads, "The findings of this study would suggest that most Vocational/Industrial teachers in the Commonwealth of Pennsylvania have ten or more years of occupational experience, thus requiring five or more years of occupational experience beyond the learning period for Vocational/Industrial certification seems feasible."

Perhaps an interesting correlation could be a study of the relationships of the years of experience and the nature of those experiences on the part of those individuals who have not successfully completed the competency examination. This suggestion is based on the assumption that there are candidates whose experiences are more specialized in one particular phase of the occupation and who therefore do not exhibit a satisfactory degree of competence in the total context of the occupation.

Problems and Conclusions

These are some of the common problems related to the Competency Evaluation program. First, the problems encountered with the applications:

1. Verification of work experience not in accordance with the instructions.

2. Insufficient detail in describing work experiences.

3. Not prepared in a "quality" manner.

4. Not submitted in time to allow for preparation of the examination.

Second, some problems brought to our attention by examinees and examiners:

1. Some examinations are broad in context in relation to the applicant's experiences which, in some cases, are of a specialized nature.

2. Some examinations need restructuring and/or up-dating.

Third, some problems in conducting the examinations:

1. Examinees are not given the opportunity to become familiar with machinery, equipment, and tools before taking the examination.

2. Examinees are under extreme pressure.

3. Some examinees have the feeling of failure immediately upon entering the shop for one reason or another, while others have the feeling of complete relaxation.

4. Many examinees report that the examiners were fair and just in conducting the examination, gentlemen in every respect, and that they treated the examinees as equals.

One problem of major importance was very noticeable immediately prior to beginning of the school year, the problem resulted from several conditions that imposed numerous complications in arranging and conducting the examination program.

It appears that many newly employed instructors were not confirmed until the last week of August. The certification requirements for the Intern Certificate increased the number of requests for Competency Examinations prior to the start of the school term--two weeks away. A number of these new appointees were reluctant to relinquish their present employment for the temporary conditions of a teaching position pending satisfactory completion of the competency examination. Time did not allow for the preparation of examinations; examiners were involved with summer activities; Labor Day weekend was pending; most shops were still prepared against the summer elements and not ready for use, and we therefore had no choice but to schedule the examinations for a later date.

There is one suggestion that is perhaps worth mentioning--a suggestion that could help all of us. When interviewing applicants, take a long and analytical look at the nature of work experiences. Compare the experiences with the certificate title and definition, the Dictionary of Occupational Titles definition and Occupational Outlook Handbook. I would suggest that a special emphasis be placed on a comparison of the applicants' experiences to the course materials to be taught.

In closing I would like to quote a short poem written by Betty Hayhurst of Charleston, West Virginia, as a means of expressing feeling and gratitude for her experiences in the Job Corps:

Isn't it strange,
that princes and kings
and clowns that caper
in sawdust rings,
and common people
like you and me
are builders for eternity?

Each is given a bag of tools,
a shapeless mass,
a book of rules;
and each must make
ere life is flown,
a stumbling block
or a stepping stone.

Vocational education is common people like you and me doing what we can by following a few simple rules, shaping stepping stones for eternity.

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Appendix

THE PENNSYLVANIA STATE UNIVERSITY

Inter-office Correspondence

Date: December 14, 1973

From: Frederick G. Welch, Co-Chairman, Undergraduate Education and Field Services, Department of Vocational Education

To: STAFF MEMBERS

Subject:

Occupational Experience Guidelines

The following is extracted from Page 67 of POLICIES, PROCEDURES AND STANDARDS FOR CERTIFICATION OF PROFESSIONAL SCHOOL PERSONNEL, under the title of "Vocational Degree, Trade and Industrial," released by the Bureau of Teacher Education, Pennsylvania Department of Education, in March, 1970:

> "Applicants who have completed the basic requirements for graduation from a college or university in an approved degree curriculum, and who meet all the requirements of the Vocational Instructional Certificates I and II (49.142 and 49.143) may be issued a college certificate for teaching trade and industrial subjects in which the requirements for a vocational instructional certificate have been met."

Chapter 49, Subchapter C, Section 49.142, effective October 7, 1972, Regulations of the State Board of Education of Pennsylvania, entitled Vocational Instructional I (Provisional), includes the following statement:

> 49.142 Vocational Instructional I (Provisional) -- The Vocational Instructional I Certificate shall be issued for entry into a vocational teaching position in the schools of the Commonwealth. The applicant shall have sufficient employment experience beyond the learning period to establish competency in the occupation to be taught, shall have successfully completed an occupational competency examination or evaluation of credentials for occupations where examinations do not exist, and shall have completed eighteen semester credit hours in an approved program of vocational teacher education in the appropriate vocational field.

The purpose of this memorandum is to establish guidelines to define and implement the phrases "sufficient employment experience beyond the learning period in the occupation to be taught" and "the learning period."

Sufficient Employment Experience Beyond the Learning Period

The following should be regarded as a statement of guidelines for considering the requirement of "sufficient occupational experience beyond the learning period:"

1. Must be wage earning experience in the occupation to be taught

2. Must be comprehensive experience to include a major coverage of the operations of the occupation--not a narrow sampling of a few operations

3. Must have been completed within a ten (10) year period prior to successful completion of the occupational competency examination.

The Learning Period

The learning period may include the following:

1. Wage earning experience in the occupation to be taught

2. Wage earning experience as an apprentice and/or learner in the occupation to be taught

3. Wage earning experience in an occupation directly related to the occupation to be taught

4. Educational experience in the occupation to be taught, e.g., as a student in vocational school, technical institute, or college

5. Educational experience in a cooperative vocational education program, in the occupational field to be taught

6. Educational experience as a student in a vocational teacher education program which includes specialized or technical courses directly related to the occupation to be taught

7. Educational experience as a student in an associate degree program, in the occupational field to be taught

8. Graduation from an approved four (4) year college curriculum when the major field of study is directly related to the occupational field to be taught

9. Military experience directly related to the occupation to be taught

10. State professional licensure or national certification in the occupation to be taught

Other Guidelines

The following are to be considered as "other guidelines":

1. Part-time work experience will be evaluated on the basis of two thousand (2,000) clock-hours as equivalent to one (1) calendar year

2. For occupations requiring a state professional license, such license will be accepted in lieu of the competency examination, but not in lieu of the Occupational Competency Program, which includes evaluation of wage earning experience beyond the learning period, the validity of licenses, and high school graduation or equivalent

3. Work experience used in verifying occupational experience in one occupation may not be used to verify occupational experience in a second occupation.

FGW:gs

VOCATIONAL TEACHER CERTIFICATION

IN NEW YORK

JAMES R. STRATTON
BUREAU OF TEACHER EDUCATION
NEW YORK STATE EDUCATION DEPARTMENT

The discussion of the certification requirements for teaching occupational subjects in New York State should be divided into several distinct categories. The categories for the most part would be in line with certain time frames.

During the 1950s and early 1960s a person desiring to become certified to teach the occupational subjects of agriculture, business or commerce, distributive education, and home economics was required to have a baccalaureate degree. The requirements for that degree varied with the institution granting it. The state placed rather strict requirements upon certain types of courses and in most cases so listed those requirements in the certification regulations. In the area of trade and technical education, or trade and industrial education, the requirements were somewhat different. For a person to teach a shop subject, it was necessary for him to have completed an approved program of education leading to high school graduation or its equivalent and, in addition, forty-eight semester hours in approved courses for the training of teachers of shop subjects (trade). Again, these particular courses were outlined within the regulations so that it became necessary for such a candidate to complete thirty-two hours of prescribed course work. The individual could be given sixteen hours of credit upon the successful completion of a performance examination in the subject area. In addition to this, the candidate must have completed at least five years of approved and appropriate journeyman experience in the trade or industrial occupation for which the certificate was to be issued. Certificates issued at that time in trade subjects were valid for ten years from date of issuance. In all cases, those desiring permanent certification in agriculture, commerce, distributive education or home economics were required to have an additional thirty hours above the baccalaureate degree, or a master's degree. For teachers of the trade subjects to become eligible for a permanent certificate, they must have completed twenty hours as follows: eight hours of science, eight hours of math, and four hours of mechanical drawing. In addition to those twenty hours, ten semester hours of professional courses in the industrial-teaching training curriculum were required. It is interesting to note that, while those requirements were spelled out in the certification publications, they were not a part of the Commissioner's Regulations and therefore were quite often loosely interpreted. Another requirement of the person seeking permanent certification in the trade subjects was that he must have completed the thirty hours mentioned

above prior to the ten-year expiration date of his provisional certificate. For those interested in becoming teacher-coordinators of vocational and industrial cooperative programs, it was necessary to complete a minimum of six semester hours, these hours being devoted to current concepts in secondary education or vocational industrial education, the organization and development of industrial cooperative programs, and the operation and conduct of industrial cooperative programs.

During the 1960s there was considerable concern within the Division of Teacher Education and Certification of the State Education Department that the certification requirements were far too rigid and left little opportunity for the teacher-training institution to use its own initiative in determining what was really needed by the candidate. In 1967 an Ad Hoc Committee was established, composed of the teacher trainers in the occupational areas, school administrators, and teachers presently teaching in the disciplinary areas. Several years were spent, and some changes were made that became effective as of September 1, 1969.

In an attempt to eliminate the rigidity of curriculum construction, the Commissioner issued new regulations pertaining to certification. These regulations stated that for a provisional certificate--and this was for those teachers seeking certification in agriculture, commerce, distributive education, and home economics--the candidates must have completed a four-year program of collegiate preparation including the baccalaureate degree at a regionally accredited higher institution or at a higher institution approved by the New York State Education Department. This new regulation was far less restrictive and had only these pertinent points that the institution must follow:

1. There must be twelve semester hours in the professional study of education and a college-supervised student teaching experience.

2. There must be thirty-six semester hours in appropriate technical courses in the subject for which the certificate is issued. The time validity for these certificates was five years from the date of issuance. In distributive education, an additional requirement was a minimum of one year of approved and appropriate experience in a distributive occupation.

For a person to become permanently certified in these areas, it was necessary for him to have completed a master's degree in teaching service or a related field, or thirty semester hours of graduate study distributed among the special subject areas, the social and behavioral sciences, and the professional study in education. The total program of preparation must have included the preparation required for the issuance of the provisional certificate. A person could substitute one year of paid full-time teaching experience on the level for which certification was being sought in lieu of the college-supervised student teaching

requirement, but only if such experience carried the recommendation of the employing school district administration. As indicated earlier, these certificates were valid for teaching special subjects, identified by the regulation as agriculture, commerce (general commercial subjects, stenography and typewriting, accounting and business practice), merchandising and salesmanship, distributive education subjects, industrial arts, and home economics.

If the reader will recall the 1960s was a time when there was a shortage of teachers, and there was a concern within New York State as to how this shortage could be eliminated. The Ad Hoc Committee that was mentioned earlier looked at this also, and in 1967 presented new ideas as to how a person could become certified to teach one of the occupational subjects within the State of New York. These ideas were discussed around the State for a period of approximately four years and in 1971 became a part of the regulations, becoming effective September 1, 1974. Briefly, this new approach to certification provided three methods by which a person could become certified in the occupational areas in New York State.

The first method was known as the Baccalaureate Degree Program. There were very few changes in what had been in effect up until 1969. The candidate must hold a baccalaureate degree; the program that was taken to earn that degree must include thirty-six semester hours in the occupational teaching areas for which the certification is sought, twelve semester hours in professional education, and a college-supervised student teaching experience. For occupational certification, a minimum of one calendar year of appropriate experience in the occupation for which the certificate is to be issued is necessary. This experience must be in blocks of not less than five months and may be included within the period of study for the baccalaureate degree if it is designed and supervised by the higher education institution and approved by the department. In the case of a person seeking certification in the trade and technical subjects, such experience may be earned prior to the applicant's matriculation for the baccalaureate degree. A provisional certificate earned in this way is valid for five years from the date of issuance. Permanent certification is granted to a candidate who has completed either a master's degree in o related to the occupational field of teaching service, or thirty semester hours of graduate study distributed among the technical courses pertinent to the field of teaching service, the social and behavioral sciences, and professional education. The total program of preparation must include the requirements for the issuance of the provisional certificate. It is noteworthy that within those requirements only numbers of hours are indicated and specific courses are not listed. The above Baccalaureate Degree Programs were appropriate in agriculture, business and distributive education (occupational), health occupations, home economics (occupational), technical subjects, and trade subjects.

The second route for certification was called the Associate Degree

Program. In this area, certificates were available in health occupations, technical subjects, trade subjects, and specialized subject areas in agriculture, business and distributive education (occupational), and home economics (occupational). Provisional certificates in the Associate Degree Program require that the candidate hold an associate degree based upon a two-year program of collegiate preparation in the occupational areas for which certification is sought, from a regionally accredited higher institution or higher institution approved or registered by the department for the preparation of teachers in the occupational area for which certification is sought. A candidate must also have eighteen semester hours in professional education and a college-supervised student teaching experience. For those going the Associate Degree Program route, a minimum of two consecutive years of appropriate experience is required in the occupation for which the certificate is to be issued. This experience, clearly related to the technology in which the associate degree is granted, may be accured either prior to or upon completion of the associate degree program. This certificate is valid for five years from date of issuance; to obtain a permanent certificate the candidate must complete thirty semester hours of upper-level collegiate study appropriate for the certification area.

The third route is entitled the Non-Degree Program. For certification in a Non-Degree Program the following certificates are available: trade subjects and specialized subject areas in agriculture, health occupations, and home economics (occupational). For provisional certification subsequent to high school graduation or its equivalent, the candidate must complete thirty semester hours in approved courses at an institution of higher education which has been approved or registered for the preparation of teachers in the area for which the certificate is to be issued. These thirty hours must include eighteen hours of professional education and a college-supervised student teaching experience. For this type of a provisional certificate, a minimum of four consecutive years experience in the occupation for which a certificate is to be issued is necessary. This experience, which must be clearly related to the occupation for which the certificate is to be issued, may be accrued either prior to or upon the completion of high school graduation. This certificate is valid for five years from the date of issuance. For a permanent certificate a candidate shall have completed thirty semester hours of graduate-level study appropriate for the certification area. Additional requirements state that persons seeking certification to teach in any of the general health occupations shall hold the appropriate New York State registration, and persons seeking certification to teach in the practical nursing program shall hold valid registration in New York State as a professional nurse. Another requirement is that a person seeking certification to teach in any occupation subject area which requires the person to hold a valid state or federal license to legally perform that service must hold the appropriate license. One year of paid-full time satisfactory teaching experience in an occupational subject may be accepted in lieu of the college-supervised student teaching when such experience carries

the recommendation of the school district administrator under which the service was performed. To be certified as a coordinator of diversified cooperative work-study programs, a provisional or permanent certificate for teaching industrial arts or an occupational subject may be extended to include service as a coordinator upon the completion of six semester hours of collegiate-level study in the organization and development of diversified cooperative programs in a program registered or approved by the department.

Prior to 1974, there had not been certification in the area of health occupations. Because of this, there is one exception to the preparation described above which states that persons legally employed in a position for which no certificate existed prior to September 1, 1974, may be issued a statement of continued eligibility, provided that three years of service have been completed by that date. The validity of that statement of continued eligibility is limited to the specific area of service for which it is issued, and it is valid in any school district in New York. The candidate for the statement of continued eligibility must hold a credential valid for service in the public schools in New York.

With the above descriptions of the varied changes in certification in the occupation areas, I think we should look ahead. A person wishing to become certified in one of the occupational areas in New York State has several choices in his search for certification. The first choice, and probably the most widely used, is to enroll in a college or university which has an approved program in the area in which he desires certification. At the present time New York State uses the approved program route wherein the institution presents to the State Education Department, Bureau of Teacher Education, a program which outlines the work that is necessary for a person to be recommended for certification. The various areas of occupational education have varying numbers of institutions among which the prospective teacher may choose. For example, there is only one institution in agriculture; in the area of commerce there are twenty-four institutions; in the area of commerce and distributive occupational subjects there are ten institutions; in home economics there are eleven institutions; and there are three institutions training in the area of trade and industrial education. At the present time there are no institutions of higher learning in New York State that have approved or registered programs leading to certification in Health Occupations Education.

The other route that a prospective teacher may follow is to attend a college or university offering the programs that he needs and then applying to the Bureau of Teacher Education on an individual transcript. I am stating this at this time because this particular capability will cease to exist after 1985. After September 1, 1974, any person in the State of New York desiring certification in the occupational education areas will be able to choose any one of the certification processes outlined above. However, New York State is in the midst of changing

its thinking in relation to how teachers can best be trained in their certification areas. The Regents of the University of the State of New York have now mandated that all teacher-training programs in New York State must be competency based. They have given deadline dates by which time all programs must be competency based, and the proposals must have been sent to the State Education Department for approval and then there is a deadline as to when the program must be in operation. All of the occupational education proposals have a deadline date of February 1, 1979. The proposals must be submitted to the State Education Department by that time; and by September 1, 1979, all programs must be in operation in the competency based mode. After September 1, 1984, the State Education Department will no longer accept individual applications for certification. After that date all persons seeking certification must be approved by an institution of higher learning having an approved or registered program in that area of certification. Occupational education, like all of the other disciplinary areas in teacher training, has been more concerned about the input of the teacher-training program than the output. The belief has been that if certain courses were taken and certain occupational experiences gained, this would make the person a competent teacher. As has been indicated in this article, the state has changed from mandating certain courses and gone to a broader based regulation. In this manner, the only guidelines given by the state has been that certain numbers of hours of courses in certain broad areas, rather than specific courses, were required. In competency based teacher education the concern is, first of all: What are the competencies that a teacher must have in order to enable a student to get the skill that is necessary for entry-level employment? After the competencies have been determined, an effort must be made to see where the teacher may achieve that particular competency. One of the thoughts uppermost in the minds of everyone presently working in the area of competency based teacher education could be startling to most teachers or instructors at the collegiate level: that it is possible for a prospective teacher to achieve a competency somewhere other than a college campus. Another important factor in competency based teacher education is the evaluation system. After a prospective teacher has been given whatever training is necessary for him to achieve a competency, how does one know that he has achieved it? The state has been very explicit that all programs must be regenerative in that there must be a constant awareness of the evaluation system as to what things they are doing, what they are supposed to do, and what things should be changed. The state has also been insistent that a means of testing for these competencies shall be made public to the prospective teacher. Another point of interest is that the competencies needed must be determined by consortia. These consortia are composed of representatives from higher education institutions presently preparing this type of teacher, from school district administrators presently hiring this type of teacher, and from teachers presently teaching in the field itself.

For the first time, we are seeing the opportunity for the teachers to have some voice in what is necessary for a person to be certified as a competent teacher. This is a change from the prevailing procedure,

and while many concerns have been expressed about its validity, there is no doubt in this writer's mind that, for the first time, when school district administrators, directors, or supervisors are asked by parents of children enrolled in particular occupational education areas, "How do you know this person is competent?"--they can answer in a manner from which they have been restricted before. The usual answer has been, "Well, they are certified by the state." Now they can say: "We know the man is competent because before becoming certified he has achieved those competencies which were felt necessary by a group of people who are interested in training competent teachers in the area." I know this must sound like quite a change, and it is causing considerable concern, particularly among institutions of higher learning which have been preparing teachers for many years in the way that we are most familiar with. I believe that if these people are honestly interested in preparing men and women to do a professional job of teaching, they will understand the validity of the argument for competency based teacher education.

For teachers of occupational education who have been certified in another state and have moved to New York State, a recently approved contract in the Interstate Reciprocity Agreement which deals with occupational education now has approximately twelve states which have signed the contract. This means that the people from those states being certified in a particular occupational area within the state, who move to New York State may become automatically certified in their area, upon application to the New York State Education Department. It is hoped that as time passes more and more states will sign this particular agreement.

I believe I have covered rather thoroughly the evaluation of certification for occupational teachers within New York State. As you can see, the Empire State has gone from a rather restricted viewpoint with a definitive listing of subject matter to a more broadly based grouping of subject areas. We are now looking ahead to the time when the principal concern of all those who are interested in the training of occupational education teachers will be not what have they taken but what can they do. Only with competency based teacher education can teachers give their occupational students the necessary education so that they can take their place as competent wage earners or be ready for a higher level of occupational training.

VOCATIONAL TEACHER CERTIFICATION IN MISSOURI

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The State of Missouri has been caught up in the rapid expansion of vocational-technical education in the United States since the Vocational Education Act of 1963 became operational in 1965. On the national scene, colleges and universities are faced with the task of recruiting and preparing a sufficient number of new vocational teachers. One of the findings of the Advisory Council on Vocational Education (1968) was:

> The total number of vocational education teachers in the United States was 124,042 for the fiscal year 1966. This number represented an increase of 13.7 per cent over the previous year. The number of vocational education teachers is expected to increase by at least 150 per cent during the next decade.
>
> It is evident that the States must expand and improve plans for teacher education to meet future requirements. Particular emphasis needs to be placed upon finding new sources of vocational teachers, in-service teacher education, flexibility in State certification, and in the selection and upgrading of teacher educators (p. 85).

Teachers of agriculture and home economics are usually prepared in a structured college program prior to teaching employment. Teachers in the health fields and in business education usually prepare by a combination of college and on-the-job experience. Because of the many divisions of distributive and trade and industrial education areas, the content is not often taught in college; it is learned through individual efforts and actual work experience, and usually before consideration of teaching as a career. Therefore, becoming a teacher is a redirection in employment, and "the majority obtained teacher education while employed as teachers rather than through the regular curriculum." (Advisory Council on Vocational Education, 1968.)

The rapid expansion of vocational programs has taken place in the State of Missouri as predicted by the Advisory Council on Vocational Education. An additional impetus has been given to the expansion by a ruling of the Department of Elementary and Secondary Education (formerly the State Department of Education) (1973). Basically, the ruling is that the curriculum of schools of Class AAA rating shall have a minimum of sixty and one half units of credit, the Practical Arts and Vocational Education portion to be twenty-eight units. To maintain a Class AA rating, the curriculum must contain a minimum of forty and one half units of credit, the Practical Arts and Vocational offering to be sixteen units. This goal is to be achieved through a transition period which terminates on July 1, 1980.

As school districts make efforts to upgrade or maintain their state classification, they are faced with the additional problem of recruiting certifiable teachers. This leads to the probable reason why there are many individuals each year, with various occupational competencies and educational levels, seeking to qualify and be certified as vocational-technical teachers. In addition, there are those previously certified desiring upgrading and consequent certification through inservice training. This will be further complicated as industrial arts programs are brought into the process of providing part of the occupational training opportunities offered at the local level. To assemble, train, and certify such a heterogeneous group calls for a modernized and concerted effort with maximum utilization and cooperation of teacher-education institutions and the State Departments of Education.

The Certification Problem

Historically, states have exercised the right to govern public education within their respective jurisdictions. As a result, no uniform pattern for certification has been established throughout the United States.

The basic problem of teacher certification, however, is being able to establish and justify criteria whereby the certifying agency may evaluate an individual and reach an objective decision as to whether he or she possesses those competencies judged to be crucial to succeed as a teacher in a chosen field.

Certification implies that there are certain skills, knowledges, and attitudes which a candidate must possess before assuming the role of a teacher. The national acceptance of successful work experience as part of the consideration for certifying most vocational teachers attests to this implication. Reese (1968) wrote:

> Such a viewpoint seems consistent with the broadly accepted belief that he who would teach an occupation must be thoroughly versed and experienced in the occupation he is to teach (p. 29).

Larson (1971) listed three major competencies for individuals desiring to successfully teach industrial and technical courses:

1. Knowledge of subject matter in the specialty.
2. Work experience in the specialty.
3. Competency in teaching and relating to students. (p. 11)

There are also peripheral problems which arise in the certification process involving vocational teachers (U.S. Office of Education, 1973). Representative are problems such as:

a. Acceptable courses accumulating to a given number of college hours completed at an accredited institution,

b. The quality and number of years of work experience, coupled with the verification of competency level whether by oral, written or performance examination,

c. The rating of military instruction and experiences compared to formal institutional instruction,

d. Evaluating industrial instruction in specialized areas,

e. Whether or not certification should be uniform within a state for teachers at different levels such as comprehensive schools, Area Vocational Schools, as well as Technical institutes and community colleges, and

f. Are there only crucial competencies which a teacher should possess or must the teacher possess, at a certain level of proficiency, all 384 performance elements identified with the USOE Project: Cooperative Curricula Development (p. 4).

Certification Procedures

The basic certification procedures established for the State of Missouri are flexible to the extent that employment of both degree and non-degree vocational instructors is possible when the local situation warrants such action. However, this flexibility is exercised primarily when considering non-degree applicants for trade and industrial, technical-industrial, and health occupation instructors. On a limited basis, non-degree instructors may be certified in occupationally related areas of agriculture, business and office, and home economics. There are only three instructors so certified in the State of Missouri during the 1973-74 school year, one in each of the three above areas. Teachers in distributive education areas must have attained a degree prior to certification.

Certification requirements as outlined in the State Plan for Vocational Education (1973) are as follows:

1.33 Public School Instructional Personnel

1.33-1 Teachers

Qualifications -

(a) Occupational experience: Three or more years of employment or other experience that contributes directly to the competency required in the

occupations or occupational area to be taught. The experience should be of the nature and quality to give a recognized status in the occupation represented. Graduation from a four-year college with a major in the vocational area to be taught or completion of a two-year technical program in the occupational area to be taught may be considered as meeting one year of the above experience requirement.

(b) Professional training: A minimum of 20 semester hours of professional training for teaching, eight of which must be approved vocational-technical teacher preparation.

Instructors in specialized vocational areas who teach on a part-time basis may be approved without the above professional preparation. Such instructors will be provided intensive training for teaching when practical.

Individuals having a baccalaureate degree involving technical preparation for employment may meet their requirement with the eight semester hours of vocational-technical teacher preparation. Except as hereinafter provided, instructors may be approved with less than the foregoing amount of professional training on condition that such preparation must be completed within a six year period.

Instructors in certain areas will have additional qualifications as follows:

Vocational Agriculture - Individuals approved to teach secondary preparatory programs of Vocational Agriculture will hold a B.S. degree in Agriculture from a Land Grant College and must have completed 45 semester hours of technical agriculture and 15 semester hours of agricultural education.

Homemaking and Consumer Education - Individuals approved to teach secondary and post-secondary Homemaking and Consumer Education must hold a baccalaureate degree with a major or comparable amount of credit in homemaking education.

Distributive, Business and Office Education - Individuals approved to teach and/or coordinate programs in these areas will be required to have a baccalaureate degree with a major or comparable

amount of subject matter appropriate to the vocational area to be taught.

Trade and Industrial Education Coordinators - Same as for Distributive, Business and Office Education (pp. 9-10).

It should be reported that vocational guidance counselors are also certified by the State Department of Education. The State Plan for Vocational Education (1973) specifies their requirements under part 1.35 of the plan as follows:

1.35-2 Guidance and Counseling

1.35-21 Vocational Guidance Counselor

Qualifications - A Master's degree in education with training in the following seven areas: Principles and Practices of the Guidance Program, Occupational and Educational Information, Mental Health, Counseling Theory and Methods, Analysis of the Individual Student, Individual Measurement (a course in group testing is the minimum requirement for the measurement area), and Supervised Counseling Experience.

Individuals working toward a Master's degree and who have completed four of the seven areas may be approved for a period of two years at which time requirements in full must be completed.

A minimum of two years of teaching experience and one year of cumulated employment other than teaching is also required (pp. 11-12).

Lifetime vocational teaching certificates issued in the State of Missouri are only in the areas of agriculture and home economics. Other vocational areas issue two-year and five-year certificates.

After initial certification, each service area director specifies renewal requirements. For example, when trade and industrial, technical-industrial, and health occupation instructors complete the required eight semester hours of approved vocational teacher preparation, the initial two-year certificate is replaced by a five-year certificate. For the five-year certificate to be renewed, the instructor must complete the following requirements (Robinson, 1972):

1. Professional Improvement

A. Attendance at three of five vocational summer workshops jointly sponsored by the State Department of Education, University of Missouri, and Missouri

Vocational Association

AND

B. Additional course work of professional nature related to the area being taught (three semester hours)

OR

C. Attendance at a technical workshop or institution sponsored by industry or organizations relating to the occupational area being taught (two weeks)

AND

II. Occupational Experience

This experience must consist of techniques and skills utilized in the instructional program or experience that will allow the instructor to expand and update the instructional program (320 clock hours)

OR

III. Occupational Survey

Evidence should be submitted that a survey has been conducted that has gathered data relating to current industrial practices and employment potential (p. 2).

Summary

The basic problem of teacher certification is being able to establish and justify criteria whereby the certifying agency may evaluate an individual and reach an objective decision that he or she possesses those competencies judged to be crucial to succeed as a teacher in a chosen field.

The State of Missouri, through the Department of Elementary and Secondary Education, certifies vocational teachers. Basic certification requires a Bachelor of Science degree; but as local demands warrant, certification is extended to individuals without a degree when the candidate presents evidence of three or more years of approved work experience. Certification on a non-degree basis carries the provision that the candidate will complete twenty semester hours of professional training.

Upon completion of eight semester hours of approved vocational-technical teacher preparation courses, the two-year certification credential is replaced by a five-year certificate. Each renewal of the

five-year certificate requires additional college or field of speciality training for both degree and non-degree instructors with the exception of those who are certified on a degree basis in agriculture and home economics.

The Department of Elementary and Secondary Education, Division of Career and Adult Education, reviews certification requirements on an annual basis, and division personnel are currently making plans to conduct a study to make a determination on additional changes which may need to be made.

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